



USDA Foreign Agricultural Service

GAIN Report

Global Agriculture Information Network

Template Version 2.09

Voluntary Report - Public distribution

Date: 10/31/2008

GAIN Report Number: IT8031

Italy

Biotechnology

Attack on the "Anti-Cancer" Tomatoes 2008

Approved by:

Jim Dever
U.S.Embassy

Prepared by:

Natasha Sachs

Report Highlights: Anger and concern rippled across Italian consumer groups over the endorsement of a second-generation biotech 'anti-cancer' tomato by leading oncologist and former Minister of Health Umberto Veronesi. Anthocyanins, the activated gene in the newly-created "purple tomato", have been shown to protect against cardiovascular disease, obesity, diabetes, and some cancers. Yet in Italy, there is a strong consensus among the public, sustained by NGOs and lobbying groups, against domestic development of biotechnology.

Includes PSD Changes: No
Includes Trade Matrix: No
Annual Report
Rome [IT1]
[IT]

Genetically Engineered 'Anti-Cancer' Purple Tomato

Anger and concern rippled across Italian consumer groups over the endorsement of a second-generation biotech 'anti-cancer' tomato by leading oncologist and former Minister of Health Umberto Veronesi. In his address last week at an oncology conference in London, Veronesi said, "there is a great deal of resistance to this fantastic projection into the future and I've never understood why. GMOs cause no problems; they are exactly the same as other organisms only better, because conscious efforts have been made to improve their qualities. It's difficult to predict what will happen but I hope there will be a growing awareness of the benefits such developments offer".

His address came at the announcement in the scientific journal, *Nature Biotechnology*, of a British study to create a 'super tomato' chock-full of healthy antioxidants. Tomato plants have all the necessary genes to create the antioxidants, but these genes are normally dormant. The team engineered a genetic modification with the addition of the two genes from the snapdragon flower, which triggered the antioxidants in the tomato to become active.

Anthocyanins, the activated gene in the "purple tomato", have been shown to protect against cardiovascular disease, obesity, diabetes, and some cancers. Before any human consumption of the genetically modified "purple tomato", however, the fruit will have to undergo toxicology studies to ensure that no other genes have been activated to produce less beneficial chemicals.

Due to widespread misconceptions in Italy regarding GMOs, Veronesi's comments and support of the new purple tomato stirred an immediate public outcry. Various consumer and environmental groups spoke out against the purple tomato; the consumer group Cordacons commenting that Veronesi's support was biased and partial. The Genetics Rights Foundation pointed out that the results of the British study were still preliminary because the test subjects were mice and not humans. One of the strongest arguments against further research of the purple tomato was made by the Environmental group VAS when they pointed out that the antioxidant engineered into the tomato occurs naturally and with similar levels in fruits such as cranberries and blackberries.

Sun-Black Tomato

Not long after news of the British study on genetically modified tomatoes went public, an Italian research team created their own version of the purple tomato, made completely free of GMOs but with similar high levels of the antioxidants. They dubbed the tomato "Sun Black", and used cross-fertilization techniques. This tomato has purple skin but traditional red flesh.

Public Consensus Against GMOs to Italy's detriment

In Italy, there is a strong consensus among the public, sustained by NGOs and lobbying groups, against domestic development of biotechnology. A poll by the National Food and Nutrition Research Institute in 2007 found that 82% of Italy's farmers would refuse to grow GM crops on their land if given the choice, while eight out of ten consumers distrust them, describing them as "less natural". Since it was not specified how these poll questions were asked; however, the results should be understood with reservation.

The irony in this present situation is that while Rome hosts the major international food agencies such as the FAO, IFAD and the WFP, Italian officials have resisted any attempts to allow any experimentation in the field of GMOs. Therefore, Italy sits on the sidelines of the gene revolution. As the largest producer of organic crops in the EU and the fourth largest

producer in the world, Italy has its organic market concerns to consider. Yet, by refusing GMO experimentation, Italy is foregoing the opportunity to develop more productive, more nutritious, and more environmentally friendly crops.